

REMARKS

The Applicants have carefully reviewed the Office Action of 29 September 2004. The Applicants note with appreciation the withdrawal of the previous rejections of the claims under 35 USC 102(b) based upon U.S. Patent 5,851,355 to Goettmann or U.S. Patent 6,165,921 to Nagata et al. Further, Applicants note the new rejection of claims 1-3, 5-7 and 9-26 under 35 USC 103(a) as being unpatentable over the Goettmann patent. The Applicants now traverse this rejection while rewriting claims 2 and 3 in independent form. Additionally, the Applicants submit new claims 27-29 for the review and approval of the Examiner.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. See *In re Vaack*, 20 USPQ2d 1438 (Fed. Cir. 1991). It is respectfully submitted that the present rejection of the claims under 35 USC 103(a) in view of the Goettmann patent simply fails to meet this standard.

In formulating the rejection, the Examiner equates the "second thermoplastic binder material" in Goettmann to the present application's "low melt bicomponent fibers". Significantly, Goettmann explicitly teaches manufacturing a non-woven web incorporating only 1 to 10% by weight of the second thermoplastic binder material. This is outside the claimed range of 20 to 60 weight percent low melt bicomponent fiber set forth in present claim 1. In fact, the present invention reads on a product incorporating from 2 to 60 times more low melt bicomponent fiber on a percentage basis than the Goettmann reference. Thus, the Goettmann reference actually teaches away from the present invention. It is well established that it is error to find obviousness where a reference diverges

from and teaches away from the invention at hand (see, for example, *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988)).

It is also significant to note that this distinction relating to the weight percentage of low melt bicomponent fiber is not the only distinction between the invention set forth in present claim 1 and the non-woven web disclosed in the Goettmann patent. In fact, the Examiner acknowledges the other distinction: that is, Goettmann fails to teach an average fiber diameter of the low melt bicomponent fiber, the high melt bicomponent fiber and the staple fiber of between about 18-22 microns as required by claim 1.

Thus, two clear distinctions are established between the non-woven web disclosed in the Goettmann patent and the insulating material set forth in present claim 1. Not only do these distinctions exist, the Goettmann patent fails to provide any suggestion or motivation for one skilled in the art to modify the non-woven web disclosed in the Goettmann patent in order to arrive at the claimed invention.

Significantly as part of the consideration of the invention as a whole, it must be appreciated that the Goettmann patent is particularly concerned with the production of a support substrate for a reverse osmosis membrane. As noted in Goettmann at column 2 lines 66, "an important feature of a membrane support substrate is its sheet porosity." As set forth at column 3 lines 1-10, the utilization of polyester staple fibers having a denier of less than 3.0 (i.e. a diameter of less than about 17.6 microns) is necessary to achieve the desired sheet porosity. As such, the Goettmann reference includes a teaching that explicitly teaches away from using fibers having an average fiber diameter as set forth in present claim 1. In teaching away from the present invention, the Goettmann patent actually supports finding claim 1 patentable.

Claims 5-7 and 9-26 which depend from claim 1 and are rejected on the same grounds are equally allowable for the same reasons.

Rewritten claims 2 and 3 should also be allowed. As noted above, the Goettmann patent explicitly teaches manufacturing a non-woven web incorporating only 1-10% by weight low melt bicomponent fiber not the 20-60% by weight set forth in these claims. Further, the Goettmann patent is specifically

directed to the production of a support substrate for a reverse osmosis membrane and there is nothing in the reference to suggest that any modification to the 1-10% by weight range is feasible and still achieve the desired properties and characteristics for the support substrate. As such, claims 2 and 3 clearly define over this art and should be allowed.


New claims 27-29 also patentably distinguish over the Goettmann patent and should be allowed. Like claim 1, independent claim 27 references an insulating material incorporating from 20 to 60% low melt bicomponent fiber. This is a weight percent range well outside of the 1 to 10% taught in the Goettmann patent. In addition, claim 27 references an average fiber diameter of about 18-30 microns. This is a range outside that explicitly taught by the Goettmann patent as being useful (i.e. Goettmann teaches average fiber diameters of less than 17.6 microns). Further, claim 27 provides that the material has a density of between about 1.0 to about 10.0 pcf. Such a density is not disclosed in the Goettmann patent. Accordingly, new claim 27 distinguishes from the Goettmann patent and should be allowed.

Claim 28 depends from claim 27 and should be found allowable for the same reasons over the Goettmann patent. Additionally, claim 28 provides a further basis for allowance. Claim 28 references the fact that the low melt bicomponent fiber has a melt flow temperature of about 100 to about 130EC and the high melt bicomponent fiber has a melt flow temperature of about 170 to about 200EC. It is not believed that such melt flow temperature characteristics are taught or suggested in the Goettmann patent.

Finally, independent claim 29 also patentably distinguishes over the Goettmann patent. Like independent claims 1 and 27, independent claim 29 reads upon an insulating material incorporating in weight percent about 20 to 60% low melt bicomponent fiber. As noted above this is 2 to 60 times as much on a percentage basis as the 1 to 10% low melt bicomponent fiber taught in the Goettmann patent. Further, it is not believed that a material density as claimed of about 1.0 to about 10.0 pcf is disclosed in the Goettmann patent. As such, claim 29 also patentably distinguishes over the Goettmann reference and should be allowed.

In summary, upon careful review and consideration it is believed the Examiner will agree that all the pending claims patentably distinguish over the prior art of record and should be allowed. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. Any fees required in connection with this Response may be debited to Deposit Account 50-0568.

Respectfully submitted,


Maria C. Gasaway
Reg. No. 51,721

Date: 12/29/04

Owens Corning
Patent Dept. Bldg. 11
2790 Columbus Road
Granville, Ohio 43023
(740) 321-7213